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By: Judith Muzyk  
Judith Muzyk

Date: December 10, 2003

Docket No.: 582/9-1477

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Albert BAUER

Conf. No.: 3467

Serial No.:

08/998,507 ✓

Group Art Unit: 3743

Filed:

December 26, 1997

Examiner: John K. Ford

For:

AIR CONDITIONING APPARATUS

Office Of Petitions  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION UNDER 37 CFR 1.181(a)(1)**

Sir:

The Applicant in the above referenced matter hereby petitions the Commissioner under 37 CFR 1.181 (a)(1) to withdraw the "Notice of Non-Compliance with the Requirements of 37 CFR 1.192(c)" mailed November 26, 2003 in the above referenced matter, enclosed as Exhibit A. Such a Notice is not subject to appeal to the Board of Patent Appeals and Interferences, and is authorized pursuant to MPEP 1206, pg.1200-12.

**Statement of Facts**

The appeal brief in the above referenced matter was mailed on April 1, 2003. A copy is enclosed as Exhibit B hereto.

The Appeal brief properly lists the claims on appeal, included as Appendix A, and provides a summary of the invention, with reference to the specification by page and line number, and to Figures 6a, 6b and 10.

The issues are stated identically to the rejections made by the Examiner in the Final Rejection dated July 2, 2002. (Exhibit C).

The Appeal Brief as submitted was in full compliance with the requirements of 37 CFR 1.192(c).

#### Argument

The Applicant believes the Examiner has improperly deemed the Appeal Brief to be in non-compliance with 37 CFR 1.192(c). The statement of the claims on appeal is accurate as is the statement on the status of all the claims in the case. The issues stated are those presented by the Examiner in the Final Rejection. Thus, there was no basis for deeming the Brief in non compliance as to these issues.

The Examiners contentions on the concise statement on the invention are clearly improper. Each statement in the Appeal Brief refers by page and line number to support in the specification and drawings, and there can be no basis for the Examiners' deeming this part of the brief in non-compliance. Rather, the Examiner takes issue with the substance of the disclosure in this section, rather than the form, which is improper. Substantive review should be the subject of the Examiners' Answer.

In any event, the Examiner has made a number of inappropriate characterizations. While the Examiner admits that there are means for varying the supply air pressure described and shown in the specification, even referencing various control elements, the Examiner fails to understand how a change in the supply air pressure could be used to adjust the pressure in the

room where the pressurized air is admittedly being supplied. Of course, one skilled in the art would clearly understand this concept.

Anyone who has added air to a tire understands that one first sets the supply pressure to the level desired, and then connects the supply to the tire. Hypothetically, if air were to be leaking out at the same time, at a low rate, reducing the pressure, one could periodically reconnect to the supply. This is a most basic control system. Theoretically, in such a control scheme, larger leaks are compensated by more frequent connections to the pressure supply source. Virtually all control systems cycle around a set point, an error signal, the difference between the set point and actual value used to initiate an action, whether adding pressurized air, in a pressure system, or adding hot or cold supply air in a temperature control system. There is nothing unusual about such a system. In fact, room temperature is typically controlled in relation to the temperature of the supply air, despite the presence of door and windows and other temperature affecting conditions. The art of record is quite clear that one skilled in this art would be familiar with temperature, pressure and flow control elements, such as valves, dampers, regulators, etc.

The Examiner requested citation to a “control algorithm”, yet that is not a stated element in any claim on appeal. The Examiner further argued that “The pressure in the room(s) 1 are not only a function of the supply pressure  $P_{zu}$  but also are a function of the positions of each of valves 60 and 61, the pressure within exhaust duct 11, as well as degree of opening of the doors or windows leading into the rooms from outside and, in general, how “air-tight” the building is as well as the ambient pressure outside of the building.” However, the only listed item capable of increasing room pressure is the supply air pressure. The other elements may reduce pressure or assist in adjusting the room pressure, but without a pressure source, the supply air pressure,

pressure control is simply not possible. Every other element referred to, whether a control element such as the valves, and the exhaust duct pressure, or an uncontrolled "variable", such as doors or windows, can be accommodated in a pressure control scheme. These merely determine the range of the likely error signal. Indeed, Figure 10 shows a fairly comprehensive control strategy for adjusting room pressure in coordination with room temperature, the subject of the present invention. However, the entire basis for rendering the Appeal Brief non-compliant relates to the substance of the Appeal, not to whether the Brief is in proper form, and the Notice should not have issued.

Because the Examiner improperly issued the Notice of Non-Compliance for reasons beyond the scope of a proper review as to form, the applicant hereby petitions the commissioner to withdraw the Notice of Non-Compliance, and the applicant respectfully requests that the Petition be granted, and the Notice of Non Compliance mailed on November 26, 2003 be withdrawn.

To the extent a fee is required for this Petition, the undersigned hereby authorizes the Commissioner to charge the petition fee to deposit account no. 04-0838.

Respectfully submitted,



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Exhibit A



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/998,507	12/26/1997	ALBERT BAUER	1704345	2665

7590 11/26/2003

WILLIAM J. SAPONE  
COLEMAN, SUDOL, SAPONE P.C.  
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Bridgeport, CT 06605

EXAMINER

ART UNIT	PAPER NUMBER
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DATE MAILED: 11/26/2003

37

Please find below and/or attached an Office communication concerning this application or proceeding.

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NOV 28 2003

COLEMAN SUDOL SAPONE, P.C.

**NOTIFICATION OF NON-COMPLIANCE WITH THE REQUIREMENTS OF 37 CFR**

**1.192(c)**

The brief does not contain a statement of the status of all the claims, pending or canceled, and identify the claims appealed as required by 37 CFR 1.192(c)(3). The following is deemed by the Examiner to be a proper listing.

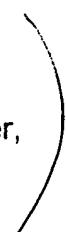
Claims 1-43 have been cancelled.

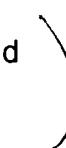
Claims 47-50, 61 and 63 are withdrawn as being directed to non-elected species.

Claims 44-46 and 51-59 have been finally rejected and these claims are presently appealed.

Claims 60 and 62 are objected to as being dependent upon a rejected base claim but are considered to be allowable and are not subject to this appeal.

If appellant agrees with the above listing and status of claims then his amended Appeal Brief should contain this statement.

The brief does not contain a concise explanation of the invention defined in the claims involved in the appeal, which refers to the specification by page and line number, and to the drawing, if any, by reference characters as required by 37 CFR 1.192(c)(5). 

Appellant does not explain what control algorithm(s) in the disclosure correspond to the limitation in claim 44 of "means for regulating an increase in pressure in at least 

one room relative to an outside pressure, to vary the room pressure in correspondence to the selected room temperature" (emphasis supplied).

In the Brief, page 2, in the "Summary of the Invention" sub-section, Appellant discusses how the channel pressure of the supply air is "raised or lowered" and specifically references page 5, lines 5-10 of the specification, page 22 lines 14-28 of the specification and page 27, lines 10-25 of the specification. These disclosures all pertain to regulating the pressure  $P_{zu}$  in the supply channel 10 (as disclosed on page 16, lines 16-18 of the specification). The only disclosure Appellant points to in his Brief is a disclosure of varying the pressure  $P_{zu}$  in the supply channel 10 not "means for regulating an increase in pressure in the at least one room relative to an outside pressure" as claimed in claim 44. Since the only regulated pressure is in the supply channel 10 and the room or rooms it communicates with can have doors which open and close (and the room or rooms apparently have no disclosed separate pressure sensors in them), it is not apparent to the Examiner where the last paragraph of claim 44 (i.e. pressure regulation of an increase in pressure in the at least one room relative to an outside pressure) is described in the "Summary of the Invention" section of the Brief in a manner consistent with the requirements of 37 CFR 1.192( c )(5).

Contrary to Appellant's statement spanning pages 3 and 4 of the Brief, Figure 6a shows the regulated pressure in supply channel 10 not the pressure in the room and, likewise, with respect to Figure 6b. Thus, the current Summary of the Invention appears

to be inaccurate. It is respectfully submitted that Appellant is generating confusion in this "Summary of the Invention" section by attempting to improperly equate the pressure in the supply duct 10 with the pressure in the room(s) 1. The pressures in the room(s) 1 are not only a function of the supply pressure  $P_{zu}$  but are also a function of the positions of each of valves 60 and 61, the pressure within the exhaust duct 11, as well as degree of opening of the doors or windows leading into the rooms from outside and, in general, how "air-tight" the building is as well as the ambient pressure outside of the building.

Finally, the brief does not contain a concise statement of the issues presented for review as required by 37 CFR 1.192(c)(6). The rejections of claim 45 are based on Johannsen in view of Benton or Johannsen in view of Rayburn and further in view of Benton.

Similarly, the rejections of claim 46 are based on Johannsen in view of Robinson or Johannsen in view of Rayburn and further in view of Robinson.

Appellant is required to comply with provisions of 37 CFR 1.192(c).

To avoid dismissal of the appeal, Appellant must comply with the provisions of 37 CFR 1.192(c) within the longest of any of the following TIME PERIODS: (1) ONE MONTH or THIRTY DAYS, whichever is longer, from the mailing of this communication; (2) within the time period for reply to the action from which appeal has been taken; or

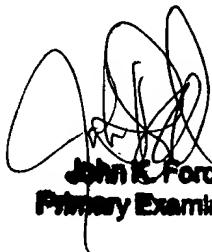
Application/Control Number: 08/998,507  
Art Unit: 3743

Page 5

(3) within two months from the date of the notice of appeal under 37 CFR 1.191.

Extensions of these time periods may be granted under 37 CFR 1.136.

Any inquiry concerning this communication should be directed to John K Ford at telephone number 703-308-2636.



John K. Ford  
Primary Examiner

Exhibit B



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**CERTIFICATE OF MAILING**

I hereby certify that this paper and every paper referred to therein as being enclosed is being deposited with the U.S. Postal Service as first class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231, on April 1, 2003 (Date of Deposit)

April 1, 2003

Date

*Judith Muzyk*  
Judith Muzyk

Docket No.: **582/9-1477**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant: **Albert BAUER**

Serial No.: **08/998,507** Group Art Unit: **3743**

Filed: **December 26, 1997** Examiner: **John Ford**

For: **AIR CONDITIONING APPARATUS**

Commissioner for Patents  
Washington, DC 20231

**APPEAL BRIEF**

Sir:

This is an Appeal from the Final Rejection dated July 2, 2002 in the above-identified application, of claims 44-46 and 51-59. The appealed claims appear in Appendix A.

**Real Party in Interest**

The real party in interest is the inventor, Mr. Albert Bauer.

**Related Proceedings**

There are no related appeals or interferences which will directly affect or be directly affected by or have a bearing on the board's decision in this appeal.

### Status of Claims

Claims 1-32 were originally in this application, which were subject to a restriction requirement. Claims 1-4, 7 and 9-32 were elected for examination. Claims 33-43 were added during prosecution. Subsequently claims 1-4, 7, and 9-43 were cancelled in favor of claims 44-63. In a subsequent species election, claims 44-46, 51-59, 60 and 62 were elected for continued prosecution. Claims 60 and 62 were objected to as being dependent upon a rejected base claim but were considered allowable and are not subject to this appeal. Claims 44-46 and 51-59 have been finally rejected.

### Status of Amendments

No amendments were made subsequent to the Final Rejection.

### Summary of the Invention

The applicant's invention relates to an air conditioning apparatus which economically ensures more comfortable room conditions and an optimal mixing of room air with supply air to achieve rapid adaption to the desired heating/cooling values (P. 2, L. 8-12).

Underlying the invention is the discovery that the greater the excess pressure is in a room provided by the supply air blown through the room, the faster the room warms up, so that efficiency is improved and large temperature fluctuations are avoided. (P. 2, L. 26 - P. 3, L. 3).

In one embodiment of the invention, the temperature of the supply air and the channel pressure of the supply air are coupled in dependence on the value of the room temperature and the desired room temperature so that the channel pressure of the supply air is raised or lowered in

the room, rooms or room zones. (P. 5, L. 5-10). Heated air with the higher channel pressure is blown into the room only if the temperature of the supply air lies above the predetermined desired temperature of the room. (P. 5, L. 26-28).

The integration of pressure regulation with temperature control is illustrated in Fig. 5. The desired temperature is compared to the actual room temperature to generate a regulating temperature. The temperature difference  $\Delta T_n$ , along with the supply air temperature  $T_{zu}$  and of the supply air pressure  $P_{zu}$  are used by the regulator 320 to generate a setting signal which is fed to the throttle control valves 60, 61 in Fig. 1. The throttle control values are regulated in dependence on the desired room temperature value, on the actual room temperature, on the temperature of the supply air as well as in dependence on the supply air pressure. (P. 22, l. 14-28).

Figure 10 illustrates the integration of pressure control with temperature control. "From a predetermined temperature threshold value of the supply air...with further rising air supply temperature, the air supply pressure also is increased, since the regulation of the air supply pressure occurs in dependence on the temperature of the air supply." (P. 27, l. 10-25).

Page 6, lines 13-18 describes a heating case in which the desired value of the room temperature is less than the actual value of the room temperature. In that case, the channel pressure of the supply air is lowered with rising room temperature. Correspondingly, for the cooling case, in which the desired value of the room temperature is greater than the actual value of the room temperature, the channel pressure of the supply air is lowered with falling room temperature.

The controlled variation of room pressure is illustrated in Fig. 6a, which shows the

pressure profile when the actual room temperature is less than the desired room temperature, and Fig. 6b which shows the pressure profile when the actual room temperature is greater than the desired room temperature. (P. 14, l. 20-26).

The pressure regulating means vary the room pressure as a controlled variable so that comfort and efficiency are improved, as overswings in temperature are avoided as well as undesirable air movements. (P. 8, l. 16-19).

#### Issues

- 1) Whether claims 44 and 51-59 are anticipated under 35 U.S.C. §102(b) by U.S. Patent No. 4,237,318 ("Johanssen").
- 2) Whether claims 44 and 51-59 are obvious under 35 U.S.C. §103(a) over Johannsen in view of U.S. Patent No. 5,971,067 ("Rayburn").
- 3) Whether claim 45 is obvious under 35 U.S.C. §103(a) over Johannsen in view of Rayburn, and further in view of U.S. Patent No. 4,347,712 ("Benton").
- 4) Whether claim 46 is obvious under 35 U.S.C. §103(a) over Johannsen in view of Rayburn and further in view of U.S. Patent No. 4,189,094 ("Robinson").

#### Grouping of Claims

There are three groupings of claims; I) claims 44 and 51-59; II) claims 45 and III) claim 46. The claim(s) in each group stand or fall together.

## Argument

### I. Claim 44 is not anticipate by Johanssen

Claims 44 and 51 through 59 were rejected under 35 U.S.C. §102(b) as being anticipated by Johanssen, U.S. Patent No. 4,257,318, with reference to Col. 2, l. 3-15, Fig. 5, Col. 4, l. 36-47, and Col. 12, l.39, and 59-61.

The Federal Circuit has consistently held that anticipation can only be established by a single prior art reference which discloses each and every element of the claimed invention. In re Bond, 910 F.2d 831 (Fed. Cir. 1990); Atlas Powder Co. v. E.I. DuPont de Nemours & Co. 750 F.2d 1569 (Fed. Cir. 1984). The Federal Circuit has also stated that “even if the claimed invention is disclosed in a printed publication, that disclosure will not suffice as prior art if it is not enabling.” In re Donohue, 766 F.2d 531, 533 (Fed. Cir. 1985) (citing In re Borst, 345 F.2d 851, 855 (C.C.P.A. 1965), cert. denied, 382 U.S. 973 (1966), Seymour v. Osburn 78 U.S. (11 Wall.) 516, 555 (1870) (publication constitutes anticipation only if it enables one skilled in the art to “to understand the nature and operation of the invention, and to carry it into practical use.”).

The examiner referred to Fig. 5 and the description beginning at column 12, line 39 as disclosing “ regulating the exhaust blower to be a fixed CFM below the supply air CFM. This clearly varies the room pressure relative to the outside so that a slight positive pressure will be maintained in the building...” (Final Rejection, page 2 emphasis added). However, the inventive system does not “maintain” a slight positive pressure in a room, but to the contrary, varies the room pressure in correspondence to the selected room temperature.

For the anticipation analysis, the applicant would draw attention to the regulating means

of claim 44 which read as follows "means for regulating an increase in pressure in the at least one room relative to an outside pressure, to vary the room pressure in correspondence to the selected room temperature." (emphasis added)

The pressure regulating means is a key feature of the invention. Rather than having a system which substantially maintains the room pressure regardless of the selected room temperature, the inventive system integrates room pressure as a controlled variable in the temperature control by varying the room pressure in relation to the selected room temperature.

As stated on page 6, lines 13-18 "in the first place, for the heating case in which the desired value of the room temperature is less than the actual value of the room temperature, the channel pressure of the supply air is lowered with rising room temperature. Correspondingly, for the cooling case, in which the desired value of the room temperature is greater than the actual value of the room temperature, the channel pressure of the supply air is lowered with falling room temperature." The effects on room pressure are illustrated in Fig. 6a, where the actual room temperature is less than the desired room temperature, and Fig. 6b, where the pressure profile when the actual room temperature is greater than the desired room temperature. (Spec. p. 14, l. 20-26) None of the art cited by the examiner discloses such a pressure regulation system which varies room pressure in correspondence to the selected room temperature.

The examiner's reliance on Fig. 5 of Johannsen is misplaced as : "Fig. 5 illustrates the required relationship between air flow of the discharge blower and the return blower in a typical distribution system... curve 160 represents the required relationship between the two blowers for the hypothetical building under discussion. Broken line 161...represents equal values of the supply and return blowers. Curve 160 is offset below curve 161 by a constant value of 5000

CFM, so that at a supply blower rate of 40,000 CFM, the return blower requirement is 35,000 CFM and so on down to a 0 return blower requirement for a 5000 CFM supply air flow. The 5000 CFM difference represents the relatively constant exhaust from the building through bathroom vents and the like previously discussed. In actual practice the actual blower is operated at slightly less than the values indicated in Fig. 5 so that a slight positive pressure will be maintained in the building....” Col. 12, lines 38-60. (Emphasis added)

This description confirms that regardless of variations in the volume of air supply, the difference between supply and return is constant, and no pressure regulation is accomplished according to Johannsen and certainly no pressure regulation means are provided to vary room pressure in correspondence to the selected room temperature. Even the slight positive pressure is described relative to exfiltration, not selected room temperature.

The reference to Col. 4, lines 36-47 is also contrary to the applicant’s invention, as it states specifically that “these temperature control groups are not part of the pressure control system of the present invention.” (Emphasis added) In fact , the invention is stated as an improved pressure control system for an air distribution system which “provides a variable dead band control for greater efficiency in maintaining a desired pressure. Col. 3, lines 15-17 (Emphasis Added).

When considering the document as a whole, there is no disclosure of the pressure regulation means as described in claim 44, and certainly, Johannsen lacks an enabling disclosure as there is nothing which would enable one skilled in the art referring to Johannsen to effect pressure regulation to vary the room pressure in correspondence to the selected room temperature. Consequently, claims 44 and 51-59 are not anticipated by Johannsen.

## II. The Prior Art Does Not Teach or Suggest the Invention of Claim 44

Claims 44 and 51-59 were rejected under 35 U.S.C. §103(a) as being unpatentable over the prior art (Johanssen) as applied to claims 44 and 51-59 discussed above and further in view of Rayburn, et al U.S. Patent No. 5,971,067.

In order to uphold a finding of obviousness, there must be some teaching, suggestion or incentive for doing what the applicant has done. ACS Hospital Systems, Inc. v. Montefiori Hospital, 723 F.2d 1572 (Fed. Cir. 1984). It is not within the framework of 35 U.S.C. §103(a) to pick and choose from the prior art only so much as will support a holding of obviousness to the exclusion of other parts necessary for a full appreciation of what the prior art teaches or suggests, as hindsight is not the test. In re Wesslau, 353 F.2d 238 (C.C.P.A. 1965). Also, “both the suggestion and the expectation of the of success must be found in the prior art, not in the applicant’s disclosure”. In re Dow Chemical Co., 837 F.2d 469 (Fed. Cir. 1988).

As discussed above, Johannsen discloses a system which maintains room pressure regardless of the variations in volumetric flow through the room. In fact, the dead band controller is specifically used to dampen variation so as to more closely maintain the constant pressure sought in the room. Fig. 4 is illustrative as it shows a command set point voltage 146 demonstrating how closely the pressure value of curve of 143 tracks with the command set point voltage 146. The description in Col. 10, lines 40-67 describe how when a vent is opened, the system adapts by making adjustments so as to maintain the pressure regardless of the opening of the vents.

This is completely contrary to the applicant’s invention which has means for regulating an increase in pressure in a room and to vary the room pressure in correspondence to the selected

room temperature. In Johannsen, the pressure control circuit is totally independent of the temperature control loops, as stated on Page 4, lines 45-46. Therefore, there is no teaching, suggestion or incentive in Johannsen for providing the system of the applicant's invention as described in claim 44.

The examiner refers to Rayburn Fig. 2 and Col. 7, lines 1-12 as describing how conventional zone air controllers operate. However, even with that disclosure, there is no disclosure in Rayburn of the particular relationship called for in claim 44 of the applicant's invention, utilizing pressure regulating means for varying the room pressure in correspondence to the selected room temperature. In fact, the combination of the teachings would lead one to use the dead band controller of Johannsen with Rayburn, to more closely maintain the room pressure, regardless of the variation in air flow volume. Thus, one is lead away from, not towards, the applicant's inventions.

Consequently, the combination of references does not teach, suggest or even hint at the applicant's invention and in fact these references teach the contrary, as one skilled in the art referring to these two patents would be led to conclude that it is important to maintain room pressure in the face of variable volume flow rates and in fact to have controls for assuring that the room pressure is maintained. Clearly, claim 44 is not rendered obvious in view of this combination.

### III. The Prior Art Does Not Teach or Suggest the Invention of Claim 45

Claim 45 was rejected under 35 U.S.C. §103(a) as being unpatentable over the prior art described above as applied to claim 44 and further in view of Benton, et al U.S. Patent No.

4,347,712. The examiner referred to Benton by stating "to vary supply air temperature of Johannsen in the manner taught by Benton to save energy would have been obvious to one of ordinary skill".

While claim 45 relates to the control arrangement for controlling the cooling/heating means to adjust the temperature of the supply air, there still remains no teaching, suggestion or incentive in the combination for providing means for regulating an increase in pressure in the at least one room relative to an outside pressure, to vary the room pressure in correspondence to the selected room temperature. As in the prior art discussed above, Benton at Col. 2, lines 34-39 describes that there is a differential pressure controller 21 "to maintain a predetermined air pressure in the supply or discharge duct 25.". Again, maintenance in the face of variable flow volumes is indicated. Note that this is the only mention in the patent of any pressure control, and there is no mention or even an inference of any room pressure control relative to the selected room temperature. Consequently, Benton similarly continues to direct one skilled in the art away from the applicant's invention as there is no teaching, suggestion or inference for utilizing a means for regulating pressure in at least one room to vary the pressure in correspondence to the selected room temperature and consequently claim 45 is not obvious in view of the combination suggested by the examiner.

#### IV. The Prior Art Does Not Teach or Suggest the Invention of Claim 46

Claim 46 was rejected under 35 U.S.C. §103(a) as being unpatentable over any of the above described prior art as applied to claim 44 and further in view of Robinson, U.S. Patent No. 4,189,094. Claims 46 further adds that the regulating means regulate the room pressure relative

to an outside air temperature.

In the first instance, none of the documents cited by the examiner teach or suggest regulating the room temperature in correspondence to the selected room temperature as described above and the deficiency is not overcome by the combination with Robinson. Robinson described the use of particular mechanisms for controlling the speed of the supply and exhaust motors "with a view to maintaining the fan outputs equal to each other and so avoiding any difference in pressure between the pool itself on the one hand and the changing areas, halls, cafeterias, etc. on the other hand..." In other words, Rayburn also describes a system having controls which maintain room pressure but do not have means for regulating an increase in room pressure to vary the room pressure in correspondence to the selected room temperature. Absent a teaching, suggestion or incentive for doing as the applicant has done, claim 46 is not rendered obvious by the combination.

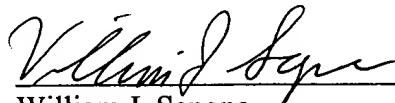
As discussed above, the applicant's invention is directed to a system which is distinct from the air conditioning systems of the prior art where room pressure is independently controlled, without relation to the temperature control loop, and is only provided to assure that constant pressure is maintained regardless of the volume of air flow. Rather, the invention goes in the opposite direction in that room pressure is a controlled variable, changing in correspondence to the selected room temperature, which surprisingly has a significant impact on air mixing and temperature uniformity, while enabling the use of up to 100% fresh air make-up. Drafts and cold/hot spots are avoided increasing comfort, and the elimination of high recirculation rates found in the prior art systems generates significant energy savings of up to 50%. The materials supplied to the examiner, including a videotape demonstration of the

inventive system in operation include testimonials to the dramatic improvement achieved with the invention. Clearly, there is no teaching, suggestion or incentive in any of the references cited for such a system and the results achieved are quite surprising and dramatic both in the improvement in temperature control in a room and in the significantly reduced energy costs.

#### IV. Conclusion

Based on the above remarks, claims 44-46 and 51-59 are novel and unobvious and reversal of each rejection is respectfully requested.

Respectfully submitted,



William J. Sapone  
Registration No. 32,518  
Attorney for Applicant(s)

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# Appendix A

44. An air-conditioning apparatus for controlling a temperature condition in at least one room to achieve a selected room temperature condition for ventilation using temperature adjusted supply air comprising:

a supply air motor for supplying air at a supply air pressure through a supply air channel to the at least one room;

cooling-heating means for adjusting a temperature of the supply air;

means for regulating an increase in pressure in the at least one room relative to an outside pressure, to vary the room pressure in correspondence to the selected room temperature.

45. The air-conditioning apparatus of claim 44 further comprising a control arrangement for controlling the cooling-heating means to adjust the temperature of the supply air.

46. The air-conditioning apparatus of claim 44 wherein the regulating means further regulates the room pressure relative to an outside air temperature.

51. The air-conditioning apparatus of claim 44 wherein the regulating means regulates the room pressure by adjusting the supply air motor to alter the supply air pressure.

52. The air-conditioning apparatus of claim 44 further comprising a control valve disposed in the supply air channel and wherein the regulating means regulates the room pressure by adjusting the control valve.

53. The air-conditioning apparatus of claim 44 wherein the regulating means regulates room pressure by setting the supply air motor to supply a set increased supply air pressure.

54. The air-conditioning apparatus of claim 44 further comprising an exhaust air motor to withdraw air from the at least one room through an exhaust air channel.

55. The air-conditioning apparatus of claim 54 further comprising means for regulating exhaust air motor to adjust an amount of exhaust air withdrawn from the at least one room.

56. The air-conditioning apparatus of claim 54 wherein the regulating means regulates the room pressure by setting the supply air motor to supply a set increased supply air pressure and by setting the exhaust air motor to withdraw a set amount of exhaust air from the at least one room.

57. The air-conditioning apparatus of claim 54 wherein the regulating means regulates the room pressure by adjusting the exhaust air motor, to adjust an amount of air withdrawn from the room through the exhaust air channel.

58. The air-conditioning apparatus of claim 55 wherein the regulating means adjusts the room pressure by adjusting the exhaust air regulating means to control the amount of exhaust air withdrawn from the room.

59. The air-conditioning apparatus of claim 54 wherein the room pressure is a measured difference between a value of the supply air pressure and a value of an exhaust air pressure.

COLEMAN SUDOL S. &amp; CO P.C.

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FOR ALBERT BAUER, ex FCC, 08998507, 9-1477

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MP



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## Mailing Certificate

Dated: April 1, 2003  
WJS-582/9-1477  
Applicant: Albert BAUER  
Serial No.: 08/998,507  
Examiner: J. Ford  
Filed: December 26, 1997  
Group Art Unit: 3743  
For: AIR CONDITIONING APPARATUS

RECEIPT IS HEREBY ACKNOWLEDGED

OF:

Transmittal Letter; Appeal Brief  
(14 pgs;) in triplicate; Petition  
for Extension of Time; Check  
#1888 for \$365.00Mailing Certificate  
Dated: April 1, 2003  
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Exhibit C



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/998,507	12/26/1997	ALBERT BAUER	1704345	2665

7590 07/02/2002

WILLIAM J. SAPONE  
COLEMAN, SUDOL, SAPONE P.C.  
714 Colorado Avenue  
Bridgeport, CT 06605

EXAMINER

FORD, JOHN K

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 07/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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COLEMAN SUDOL SAPONE, P.C.

 <b>Office Action Summary</b>	Application No.	Applicant(s)	
	08/998507	Bauer	
	Examiner	Art Unit	
	FORD	3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)  Responsive to communication(s) filed on 12 March 2002

2a)  This action is FINAL.      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)  Claim(s) 44-63 is/are pending in the application.

4a) Of the above claim(s) 47-50, 61 & 63 is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 44-46, 51-59 is/are rejected.

7)  Claim(s) 60 and 62 is/are objected to.

8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

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**Application Papers**

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

15)  Notice of References Cited (PTO-892)

16)  Notice of Draftsperson's Patent Drawing Review (PTO-948)

17)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

18)  Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_

19)  Notice of Informal Patent Application (PTO-152)

20)  Other: \_\_\_\_\_

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Applicant's response of March 12, 2002 (Paper No. 29) has been carefully considered.

Applicant argues that Johannsen has no "means for regulating an increase in pressure in the at least one room relative to an outside pressure, to vary the room pressure in correspondence to the selected room temperature". The Examiner disagrees.

Figure 5 of Johannsen and the description thereof beginning at col. 12, line 39 clearly discloses regulating the exhaust blower to be a fixed CFM below the supply air CFM. This clearly varies the room pressure relative to the outside so "that a slight positive pressure will be maintained in the building to prevent infiltration and to establish exfiltration therethrough (col. 12, lines 59-61). The regulation is done by control circuitry actuating intake vanes 37 associated with the inlet of the blower. Moreover there is a clear variation of the room pressure in correspondence to the selected room temperature, as disclosed in col. 4, lines 36-47. It is conventional in this art to have the dampers in damper control boxes 21a and 21b in Figure 1 open and close to modulate the amount of conditioned air entering a room (or zone) based on the temperature sensed in the thermostat located in that room (or zone).

Like Johannsen, applicant discloses a series of control systems which together <sup>co-act</sup> ~~so as to~~ produce the result claimed in the last clause of claim 44.

Applicant's comments with respect to the other references are similarly unconvincing. With respect to Rayburn applicant ignores the specific Figure and description that the Examiner called to his attention and instead argues an air quality sensor (irrelevant to the claims at issue

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here) in Rayburn behaves in some other manner. Rayburn was only used to illustrate how conventional thermostatic room dampers operate and nothing more.

With respect to Benton, applicant appears to concede that it teaches the subject matter of claim 45, because applicant fails to argue that it doesn't. The same is true of Robinson with regard to claim 46.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 44 and 51-59 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Johannsen (4,257,318).

See col. 2, lines 3-15 and Figure 5, in particular.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 44 and 51-59 rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claims 44 and 51-59 above, and further in view of Rayburn et al. (5,971,067).

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Rayburn discloses in Figure 2, and col. 7, lines 1-12 how conventional zone air-volume controllers work. The explanation in Johanssen is quite abbreviated, however it is clear from the state of the art that Johannsen is disclosing a variable air volume system such as shown by Rayburn and, to the extent that it is necessary, it would have been obvious to have used Rayburn's room temperature controlled dampers in Johannsen.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of the prior art as applied to claim 44 above, and further in view of Benton et al. (4,347,712).

To vary supply air temperature of Johannsen in the manner taught by Benton to save energy would have been obvious to one of ordinary skill.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of the prior art as applied to claim 44 above, and further in view of Robinson (4,189,094).

Robinson teaches varying the amount of ventilation of a building responsive to outdoor temperature. To have varied the pressure set point of the supply fan to increase the fan speed of Johannsen in response to outdoor temperature as taught by Figure 3 of Robinson to save energy would have been obvious to one of ordinary skill.

Claims 60 and 62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

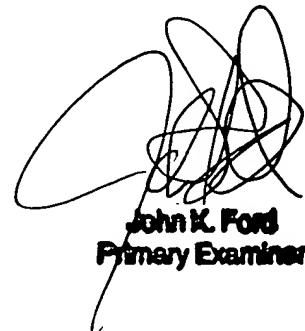
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to John Ford at telephone number 308-2636.

J. FORD:th  
June 29, 2002



John K. Ford  
Primary Examiner